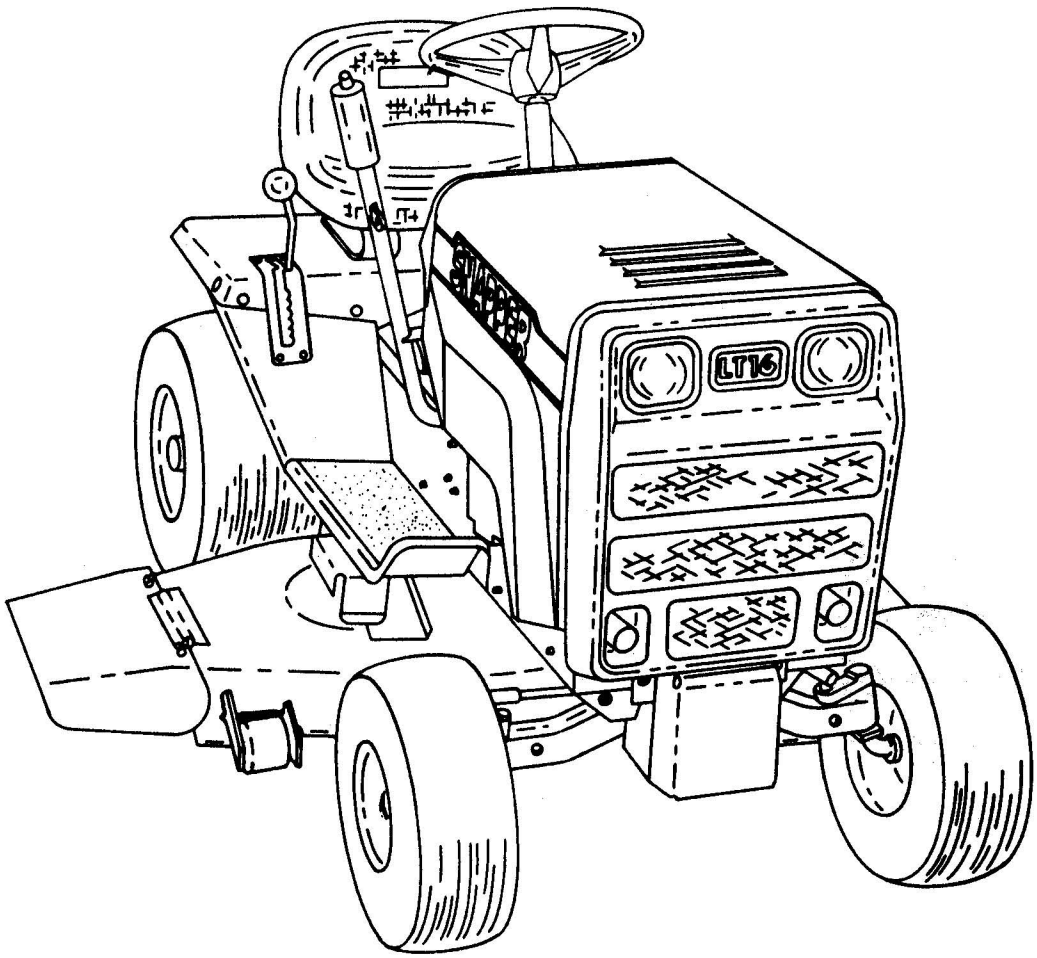
Safety Instructions & Operator's Manual for

SNAPPER®

MODEL LT16 SERIES



LAWN TRACTORS

Thank you for buying a SNAPPER product! Your SNAPPER Lawn Tractor was designed and built to provide long and satisfactory service. Keep in mind that it, like any other mechanical device, can be potentially dangerous if used improperly and that no accident prevention program can be successful without the wholehearted co-operation of the person responsible for the operation of the equipment. Study this manual and pay particular attention to the Important Safety Precautions on page 2. Following these instructions will help you continue to enjoy the trouble-free performance expected of a SNAPPER product.

SNAPPER POWER EQUIPMENT
McDonough, GA • 30253

A FUQUA INDUSTRIES Company

MANUAL 1-4854 (1/84)

IMPORTANT SAFETY INSTRUCTIONS

WARNING: This powerful cutting machine is capable of amputating hands and feet and can throw objects that can cause injury and damage! Failure to observe the following safety instructions could result in serious injury. Carefully read this manual and question your dealer if something is not clear. Should the dealer be unable to answer to your satisfaction, write or call the Customer Service Department at SNAPPER Power Equipment, McDonough, Georgia 30253 (phone 404-957-9141).

PROTECTION FOR CHILDREN

1. DO NOT allow children in yard when machine is operated.
2. DO NOT allow children to ride on machine or on attachments.
3. DO NOT allow pre-teenage children to operate machine.
4. Only responsible teenagers with mature judgement shall be allowed to operate machine and only under close supervision.

PROTECTION AGAINST TIPOVERS

1. DO NOT operate machine on slopes exceeding 15° (27% grade).
2. On slopes above 10° (18% grade); exercise extreme caution; shift into LO gear beforehand, turn blade OFF when traveling uphill; reduce speed to No. 1 position, avoid sharp turns and uphill starting.
3. DO NOT mow under any condition where traction or stability is doubtful without first test driving over the terrain with blade OFF.
4. Stay alert for holes and other hidden hazards and keep away from ditches, washouts, culverts, fences and protruding objects.
5. DO NOT mow back and forth across face of slopes.
6. KEEP A SAFE DISTANCE (at least three feet) away from edge of ditches and other drop offs.

OTHER IMPORTANT PRECAUTIONS

1. Read and follow operator's manuals and instructions furnished with attachments.
2. Only mature, responsible persons shall operate the machine.
3. Mount and dismount machine from left side.
4. Wear appropriate protective clothing when mowing such as long pants and substantial footwear, not barefoot or with open sandals.
5. Practice operation of machine with blade OFF to learn controls and develop skill.
6. Persons under the influence of alcohol or drugs must not operate machine.
7. Know how to stop blade and engine quickly in preparation for emergencies.
8. Keep people and pets a safe distance from machine.
9. Shields, deflectors, switches, blade controls and other safety devices must be in proper position and functional.
10. Clear area to be worked of wire, rocks and other objects that could cause injury if thrown by blade.
11. STOP blade, stop engine and remove key when leaving machine.
12. DO NOT operate machine unless properly seated with feet on foot rests or pedal.
13. Keep hands and feet away from rotating blade underneath deck. Never place foot on ground while blade is ON or when machine is in motion!
14. Turn blade OFF, stop engine and wait for blade to stop before attempting to unclog grass or leaves to prevent loss of fingers or hand.
15. Blade must be switched OFF except when cutting grass. Set cutter in highest position when mowing over rough ground.
16. Deflector or grass catcher must be in position. Never point discharge at people, passing cars, windows or doors. Watch out for traffic when crossing or near roadways.
17. Operate in reverse only after careful observation of entire area behind the machine. DO NOT mow in reverse unless absolutely necessary.
18. Service machine and make adjustments only when engine is stopped.
19. Have machine serviced by an authorized Snapper dealer at least once a year and have the dealer install any new safety devices.
20. Use only genuine Snapper replacement parts to assure that original standards are maintained.
21. Tighten all nuts, bolts, screws, frequently and check, adjust, repair or replace brakes as needed.
22. Lubricate machine at intervals specified in manual to prevent controls from binding.
23. Mow only in daylight or with good artificial light.
24. Handle gasoline with care! Never remove cap while engine is running. Fill tank outdoors only with engine stopped and cool. Store gasoline in approved container, out of the reach of children, in well ventilated, unoccupied building.
25. DO NOT change engine governor speed settings or overspeed engine.
26. Check grass catcher components frequently for signs of wear or deterioration and replace as needed to prevent injury from items going through weak or worn spots.
27. Exercise caution when pulling loads. Limit loads to those you can safely control and attach loads to hitch plate as specified with Snapper attachment instructions.

OPERATION

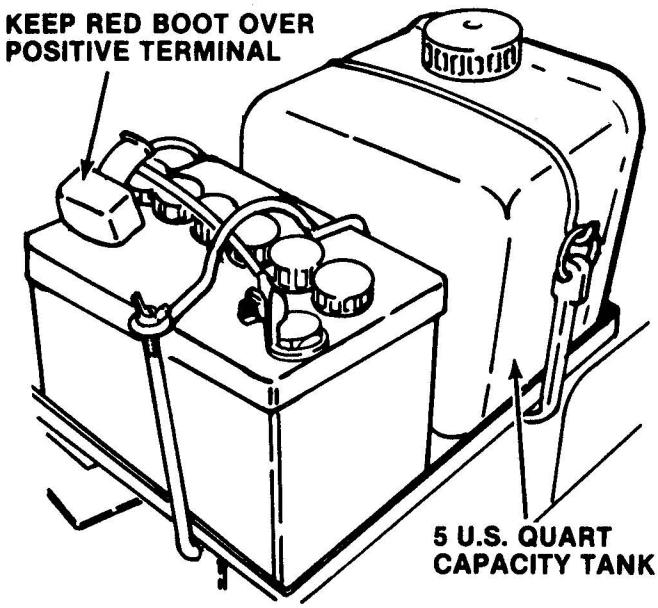


FIG. 1 - BATTERY & FUEL TANK

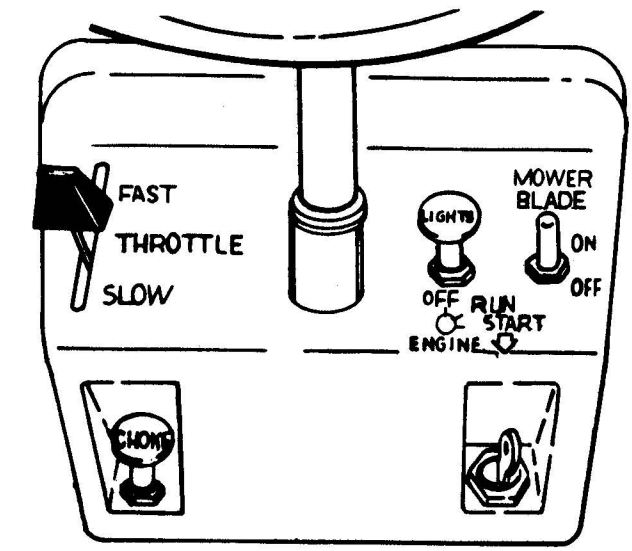


FIG. 2 - DASH PANEL CONTROLS

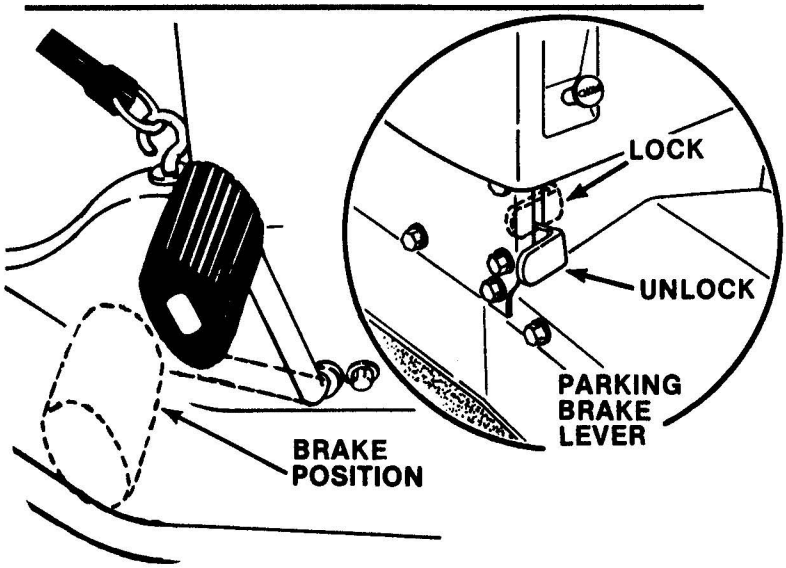


FIG. 3 - CLUTCH/BRAKE PEDAL OPERATION

Become thoroughly familiar with the location of all controls and the function of each before operating the machine. Make sure each operator reads the important safety precautions on page 2 of this manual and all safety messages on the tractor and attachments.

PRE-START CHECKS

Before each start-up, check and/or perform the following:

1. CHECK TIRES and add air as needed to bring pressure up to specifications (10 psi front, 8 psi rear tires).

2. CHECK ENGINE OIL and add new oil as needed to bring level up to (but not over) the full mark on the dipstick.

3. CHECK EXTERIOR SURFACES and remove any accumulation of grass, oil, chaff, dirt etc. especially from areas such as cooling inlets and outlets on tractor and cooling fins on engine.

4. CHECK FUEL and add gasoline (of grade specified in engine manual) to bring the level up to but not higher than the full line on side of tank.

5. RE-ADUST SEAT & STEERING WHEEL as needed to most comfortable position (Refer to instructions on page 4).

OPERATION

Know beforehand how to stop the machine in preparation for possible emergencies. The mower is stopped by moving the MOWER BLADE switch downward to OFF. Forward or rearward motion of tractor is stopped by pushing the CLUTCH/BRAKE pedal all the way down. The engine is stopped by turning the engine ignition key to the OFF position. Keep these points in mind while operating.

STARTING ENGINE

1. The LT16 tractor is equipped with interlocks to prevent starting of the engine until the following conditions are met:

   A. The operator must be seated on the tractor seat.
   B. The CLUTCH/BRAKE pedal must be fully depressed.
   C. THE MOWER BLADE switch must be in the OFF position.

The seat interlock also functions to shut off the engine in the event the operator's seat is vacated while the machine is in operation. In the event of an interlock malfunction, do not continue operating the tractor until the condition is corrected.

2. Pull the CHOKE knob all the way out to start cold engine. Little or no choking will be needed when restarting a warm engine.

3. Move engine THROTTLE past midpoint into a FAST setting. You may have to vary the setting somewhat at first to find the best position for your engine.

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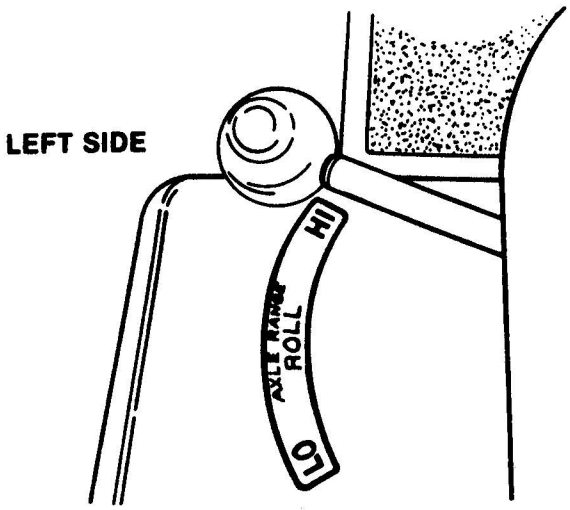

FIG. 4 - AXLE RANGE SELECTOR ON LEFT

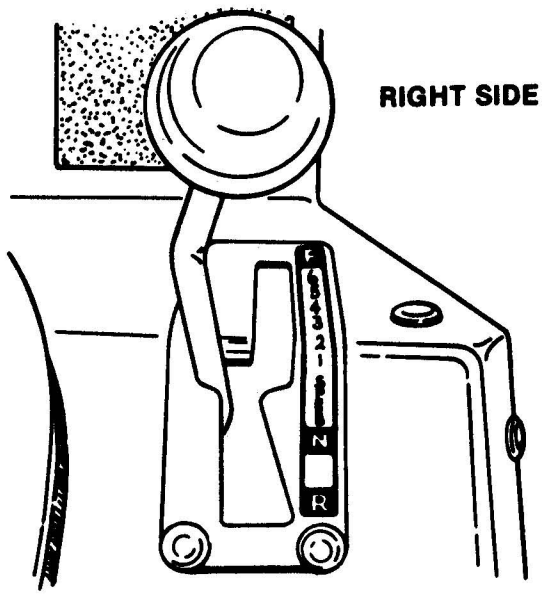

FIG. 5 - GROUND SPEED SELECTOR

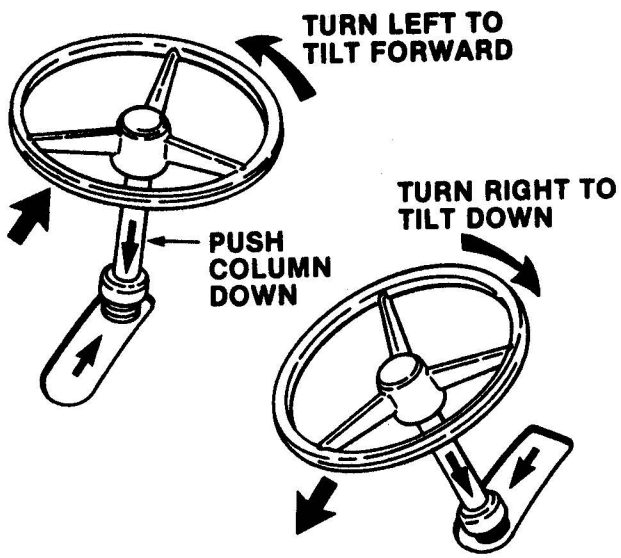

FIG. 6 - TILTING STEERING WHEEL

4. Insert key in ENGINE IGNITION switch , turn key to START position to crank engine and hold until engine starts then release. NOTE: Limit cranking intervals to five seconds duration to prevent overheating of starting motor and/or depletion of battery energy. Normally five seconds is sufficient cranking time for starting. If this time is exceeded locate and correct cause of starting problem.

5. As engine warms, gradually push choke knob back-in to panel. Move throttle to desired engine speed setting.

TO START MOTION

After the engine has been started and is running smoothly, proceed as follows to start forward or rearward motion.

1. Before releasing the Clutch/Brake pedal, shift the axle into HI(fast) or LO (slow) range with the selector located to the left of the operator's seat (figure 4). NOTE: To avoid gear damage, DO NOT shift axle range with machine in motion! It may be necessary to rock tractor slightly forward or reverse to shift.

2. With Clutch/Brake pedal depressed, shift Speed selector to **1** for forward or **R** for reverse and release pedal. (For comfort and safety always shift back to **1** before starting forward.)

Avoid uphill starts. If machine is stopped going up slope, turn blade **OFF** and back slowly down slope. If uphill start must be made, turn blade **OFF** and set throttle at half speed. The axle range selector must be in **LO** and the speed selector must be in **1**.

TO STOP MOTION

Push Clutch/Brake pedal all the way down to stop forward or rearward motion.

TO SET PARKING BRAKE:

Depress Clutch/Brake Pedal.
Raise parking brake lever to lock pedal down.

TO ROLL MACHINE

Shift axle range selector to roll or hold Clutch/Brake pedal half down.

TO ADJUST OPERATOR'S SEAT

FORE & AFT ADJUSTMENT: With machine stopped, loosen the two wingnuts on seat rails. Sit in operators seat and while depressing the clutch/brake pedal, slide the seat forward or rearward to the most comfortable position then lock in position by tightening both wingnuts.

SEAT TENSION ADJUSTMENT: Raise Seat. Turn large wing nut clockwise for heavier operator or counter clockwise for lighter operator.

TO ADJUST TIRE PRESSURE

Check tire pressure at frequent intervals. A low tire on one side causes uneven mowing. Pressure in front tires should be maintained at 10 psi while rear tire pressure should be 8 psi.

TO OPERATE MOWER

During transport or for clearance through gates it may become necessary to raise the discharge deflector. Reinstall the wing nuts on the studs when the deflector is raised so they will not be lost. Be sure to lower the deflector and clamp it securely down with the wing nuts before mowing.

The cutting height can be changed to any one of nine positions by raising or lowering the cutting deck attachment with the implement lift lever as shown.

To prevent accidental starting of the blades, the mower blade switch (Figure 2) is designed so that it must be pulled out before it can be moved forward to the blade ON position.

To suit mowing conditions, experiment by increasing engine speed and/or decreasing driving speed until smoothest cut is obtained without placing engine under heavy strain.

SERVICE

To retain the quality of your tractor, use Genuine Snapper Replacement Parts only. Contact your local Snapper dealer for parts and service assistance. For the correct part or information for your particular mower, always mention model and serial number. We recommend returning the tractor to an authorized Snapper Dealer on a yearly basis for inspection and addition of any new devices which might upgrade the safety of your mower. For the nearest Snapper Dealer, check the yellow pages under the heading LAWN MOWERS. For engine parts and service, look for the engine manufacturer's dealers under the heading ENGINES-gasoline.

MAINTENANCE & LUBRICATION SCHEDULE

Refer to the engine owner's manual for service specifications on the engine itself. The follow applies primarily to the tractor and optional mower attachments. Clean fittings before greasing.

FIRST 5 HOURS (NEW UNIT)

- ENGINE OIL: Change oil in crankcase. Refer to engine owner's manual.
- TRACTOR: Check all fasteners and retighten as needed.

EVERY 25 OPERATING HOURS

- FRONT WHEEL BEARINGS: Lubricate bearings through the fitting on hub of front wheels (figure 8).
- FRONT AXLE PIVOT & SPINDLES: Lubricate spindle fitting on each wheel (see figure 8) and the center pivot fitting on underside of the front axle .
- CHANGE OIL IN ENGINE CRANKCASE with oil of weight and grade specified in engine owner's manual.
- ENGINE AIR CLEANER: Refer to engine owner's manual for details.
- IDLER(41" MOWER): Lubricate bearing thru fitting on idler arm pivot.

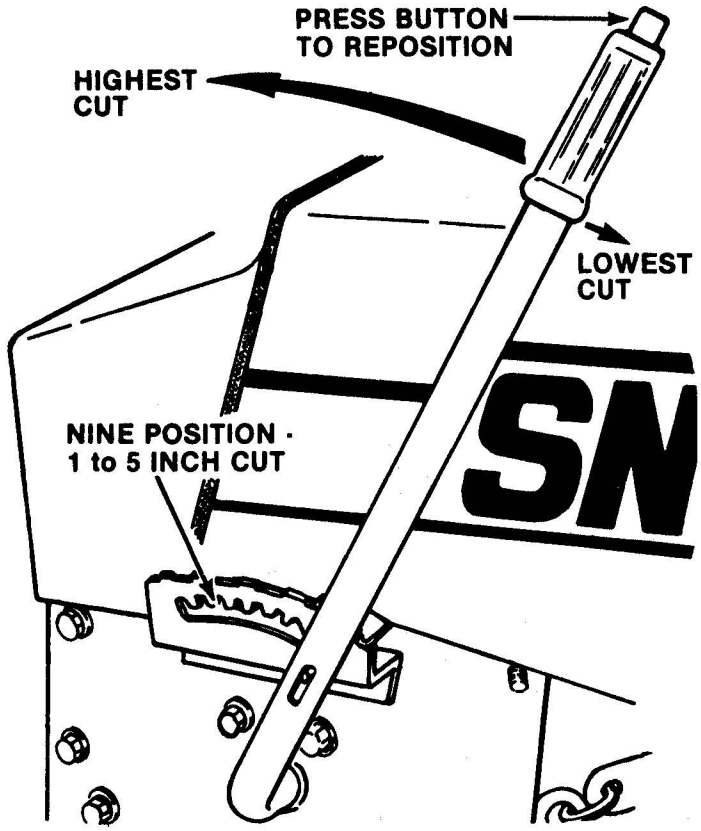

FIG. 7 - IMPLEMENT LIFT LEVER

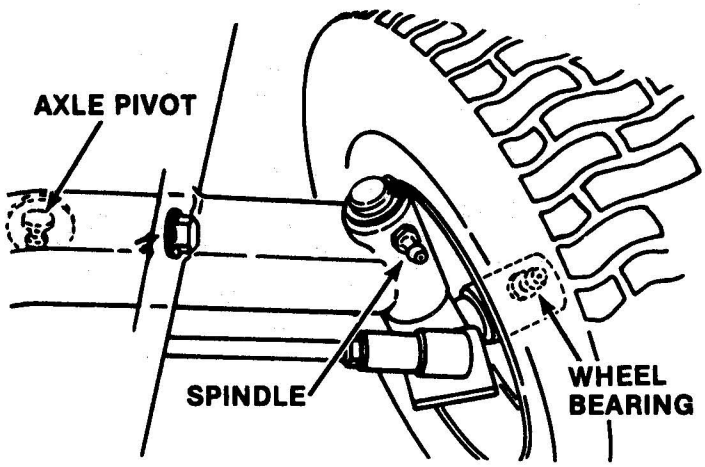

FIG. 8 - FRONT END GREASE POINTS

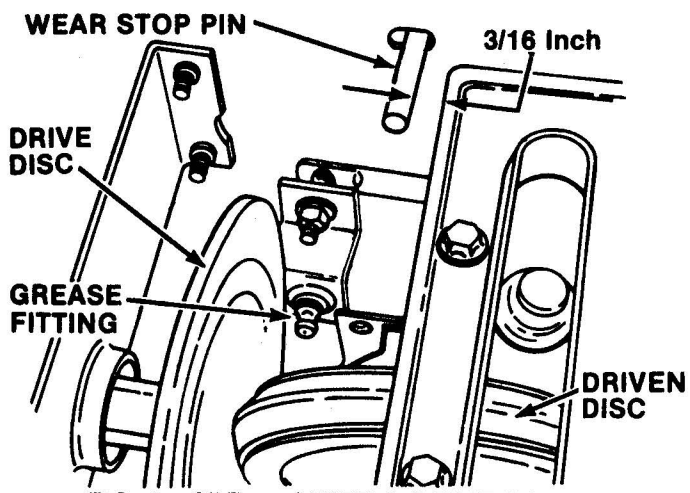

FIG. 9 - SPEED SHIFT & DRIVE DETAIL

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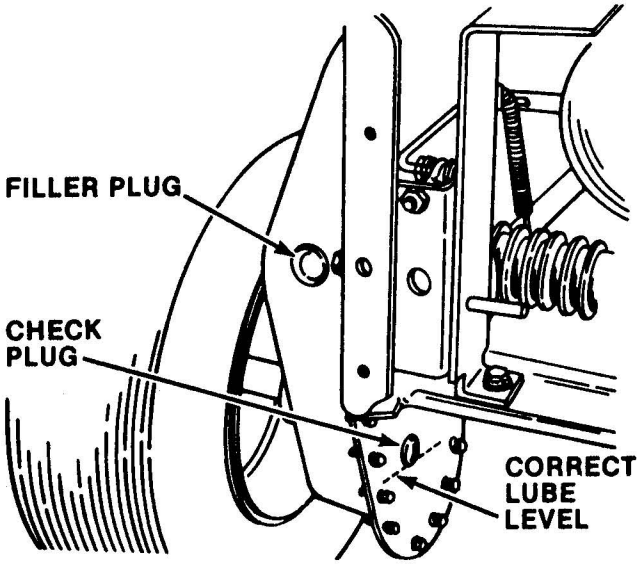

FIG. 10 - TRANSMISSION LUBE LEVEL

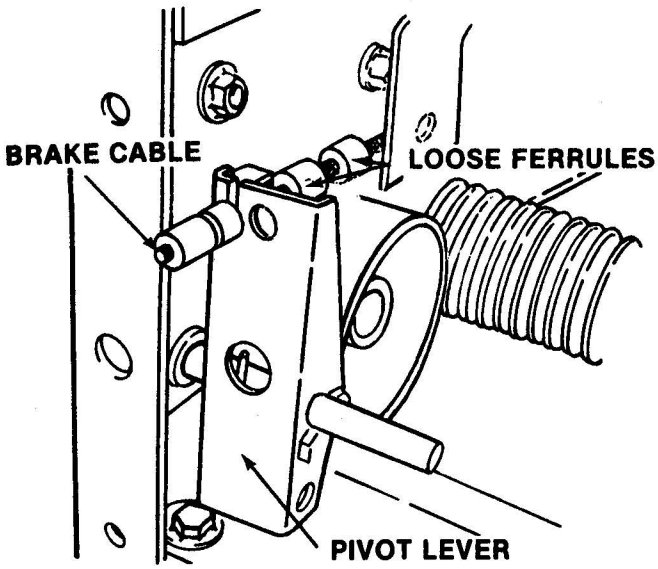

FIG. 11 - WHEEL BRAKE ADJUSTMENT

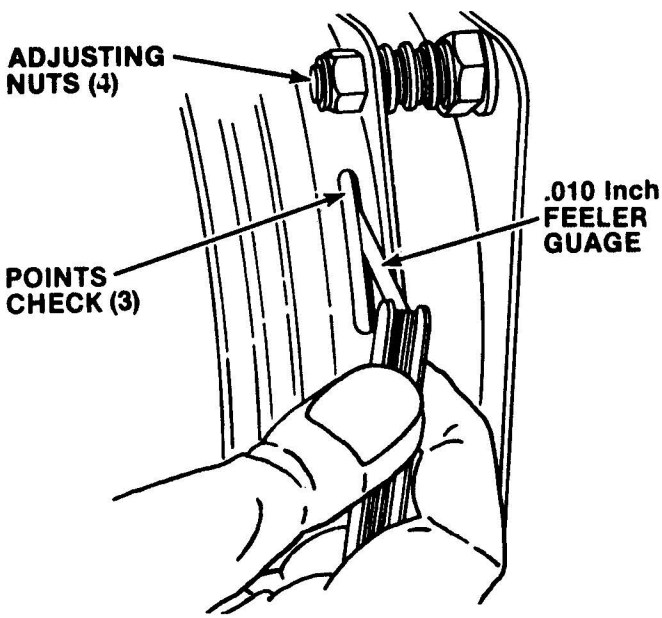

FIG. 12 - BELT DRIVE CLUTCH ADJ.

TWICE YEARLY SERVICE (OR EVERY 50 HOURS)

- LUBRICATE FITTINGS (with two shots of grease) on:
  1.ground speed selector lever (figure 9).
  2.implement lift lever
  3.steering mechanism between gas tank and battery.
  4.steering sector gear pivot under gas tank.

END OF EACH SEASON(OR EVERY 100 HRS)

- TRANSMISSION DIFFERENTIAL: Remove check plug on inside of unit shown in figure 15 to check level of oil. Add Snapper #00 grease as needed thru upper fill hole to bring the level up to the lower edge of the check plug hole. Reinstall plugs after servicing.
- CHAIN CASE: Remove plug and check. If dry, add one ounce of Snapper 00 grease--do not overfill. Total capacity must not exceed 2 ounces.
- MOWER ATTACHMENT SPINDLES(S): Lubricate fitting for blade spindle bearings with two shots only of bearing grease once each year.
- SERVICE Engine air cleaner element, spark plug.
- SERVICE FUEL FILTER as instructed on page 8

WHEEL BRAKE ADJUSTMENT

After extensive use, the wheel brake band may wear to the point where the brake pedal goes all the way down to the foot pedal. . The brake adjustment is located inside the rear cover plate as shown in figure 11. To adjust, remove the rear cover plate. Test with the engine off by shifting the axle range selector to **HI or LO** . Attempt to roll the machine by depressing the clutch/brake pedal slowly. There should be a place where the clutch is disengaged and the brakes are not yet applied. This should occur in the first half of the pedal travel.
Move a loose ferrule to the rear of the brake pivot lever to increase braking.

DRIVEN DISC SERVICE

If the drive does not engage after extended use, it may be that the yoke stop pin is preventing the driven disc from engaging the drive disc (see figure 9). The stop is set to prevent the driven disc from contacting the drive disc when rubber wears down to the point where the metal rims could damage the aluminum surface of the drive disc. Replace the rubber driven disc when excessively worn or when unevenly worn. To replace, remove the rear cover plate, shift the drive into neutral, remove the three nuts from the hub, remove the old disc and replace it with new disc. The stop pin should be located 3/16″ from the forward edge to shift yoke (figure 9).

ELECTRIC CLUTCH ADJUSTMENT

Should the mower blade take more than five seconds to stop after the mower blade is switched off, the brake plate may need adjusting. When properly adjusted, a .010″ feeler gauge will fit thru the opening on both sides and bottom of the clutch as shown in figure 12. To adjust, turn the four adjusting nuts in or out as needed to obtain the .010″ clearance.

MOWER ATTACHMENTS

The following applies to the single blade 33" and multi-blade 41" and 48" mower attachments which are popular options for the LT16 series tractors. Other attachments such as the snow thrower are covered in instructions furnished with the attachments. Make sure that the mower is checked and installed properly as shown in the set-up instructions furnished with the mower.

MOWER SERVICE & ADJUSTMENTS: Keep the topside of the mower free of grass cuttings. Build-up of clippings could cause belt problems and also might present potential fire hazard especially when dry. If uneven cutting is noted, check the tire pressure first as this is the most common cause. If tire pressure is correct and uneven cutting persists, move the tractor to a flat level surface, such as a garage floor, and check the deck level. This is done with the tractor engine off as follows.

SIDE TO SIDE LEVEL: Raise the deck and place a piece of angle iron or similar triangular shaped block under the rear center of the deck then lower the deck onto the block. Move the block until the deck is balanced from side to side. On 33" mowers, measure the clearance between the floor and outside edges of the deck. On 41" and 48" mowers, set the outside blades as shown in figure 15 and measure from the floor to the outside cutting tip of the blades. The deck is considered level from side-to-side if both measurements are the same within 1/8" . The side to side adjusting knuckle is located on the front lift arms of the mower as shown in figure 13. To adjust, loosen the capscrew on the side of the knuckle and the jam-nut then turn the square head setscrew clockwise to raise that side or counterclockwise to raise the other side. When level within 1/8", hold the setscrew and tighten the jam-nut then tighten the capscrew tight to lock at new setting. Remove the block and check rear chains. If one of the chains is slack, adjust eyebolt until both chains have equal tension, then recheck for level.

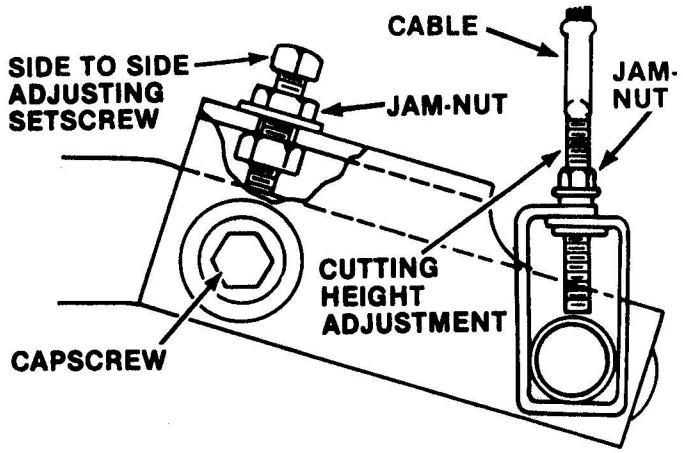

FIG. 13. - MOWER ADJUSTMENTS

FRONT TO REAR LEVEL: On the 33" mower, measure the distance between the floor and the front and rear edges of the mower deck. The 33" mower should be level to 1/8" lower at the rear. On multi-blade mowers, align the blade on the discharge side parallel to the tractor frame and measure the distance from the front cutting tip to the ground. Rotate that cutting tip to the rear and re-measure. The multi-blade mowers should measure 1/4" higher at the rear.

To adjust, raise or lower the rear of the mower by loosening the jam nuts and turning the locknut on the bottom of the chain adjusting eyebolts on both sides on equal number of turns to achieve the proper level. Tighten the jam nut against the bracket to lock at the new setting.

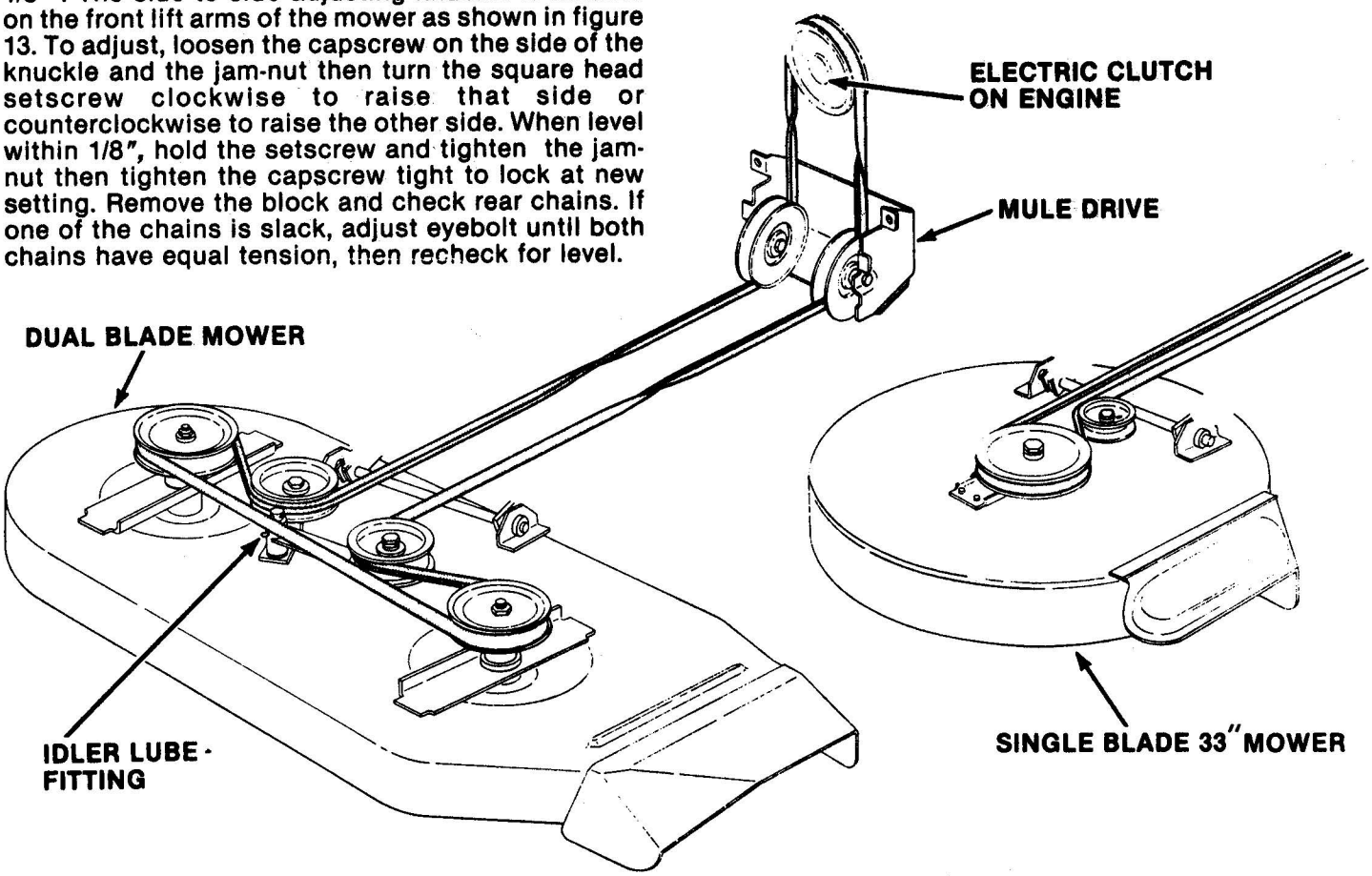

FIGURE 14 - MOWER DRIVE BELT DETAIL

CUTTING HEIGHT ADJUSTMENT: With the implement lift lever in highest cut position, align the blade parallel with the frame. Measure distance from floor to forward tip of blade. This should be five inches. If adjustment is needed, loosen jam-nut on cable and turn cable up or down until 5" is measured. Tighten jam-nut.

MOWER DRIVE BELT SERVICE

The drive belt arrangement for the each mower is shown in figure 14. To install or replace the belt, loosen the pulleys of the "mule" drive at front, loop the belt around the electric clutch pulley an engine, route it inside the mule drive pulley as shown and around the pulleys of mower. Note: to get the belt around the pulleys on the multi-blade mowers , the belt covers on the outside pulleys must be removed. DO NOT operate the mower without these covers:

BATTERY SERVICE

Check the battery once each month. Remove the caps and add distilled water as necessary to bring the level of the electrolyte up to about 3/32" over plates in each cell. **DO NOT FILL TO THE RINGS.** Carefully reinstall battery caps. In freezing weather, charge the battery after adding water to thoroughly mix the water in the electrolyte. Keep the terminals and straps clean and tight and make sure the red boot (shown in figure 1) remains in position over the positive terminal. Always disconnect negative (-) terminal first and reconnect last!

The engine is equipped with a flywheel alternator to charge the battery. If the tractor is not run regularly, connect the battery to a charger at frequent intervals to maintain the specific gravity at 1.250 or higher. If this reading falls below 1.175, the battery liquid may freeze when temperatures drop to around zero degrees F.

To charge, connect per instructions furnished with charger. If time allows, slow charge at 1 amp for ten hours or as an alternate, fast charge at 3 amps for four hours. Observe all precautions while charging.

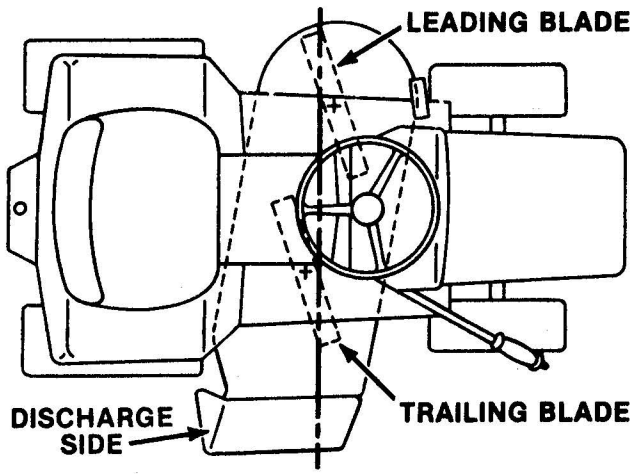

FIG. 15 · DECK LEVEL CHECK

FUEL SYSTEM SERVICE

Check the in-line fuel filter at frequent intervals and replace before the screen becomes clogged with sediment. Make sure the replacement is correctly installed with IN marking toward the tank and OUT side toward the engine. Route the fuel line thru the holder strap. Check the fuel system components frequently and replace any parts showing worn spots or cracks.

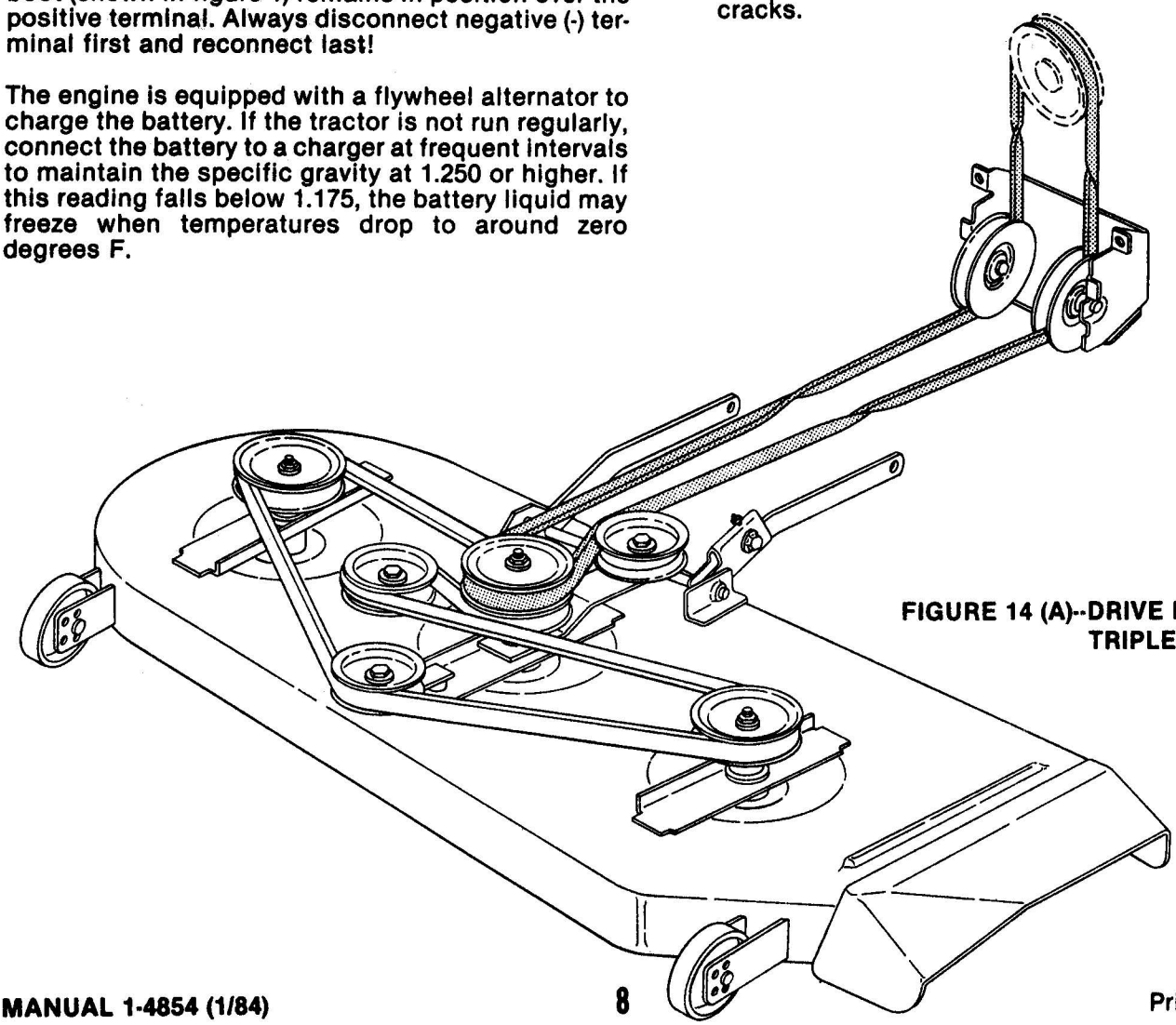

FIGURE 14 (A)--DRIVE BELTS ON TRIPLE BLADE MOWER